MONOPOLY PRICES IN JAPAN

By KATSUHIKO MATSUISHI*

I. *Introduction*

Recent price rises in Japan is really uncommon. Wholesale prices of April registered 11.4 percent rise and consumer prices of Tokyo 10.1 percent rise to the same month last year. In this connection the survey of public opinion done on May 1 this year by *Asahi Newspaper* is noteworthy. Fifty one percent of Japanese people answered that living had become worse than previous year and they attributed this to inflation (39 percent of people answered unchanged and only 7 percent better). Naturally they ask the Government to take a strong measure against inflation first of all.

At the very time when the majority of people are suffering from the anxiety and aggravation of life caused by inflation, big corporations are enjoying the unprecedentedly biggest increase of profit and busy managing to conceal it. The current profit of large 381 corporations registered at Tokyo Stock Exchange Market, 1st Section, showed 40 percent increase at the March settlement of accounts to the last September settlement. This is the largest increase since the initiation of the item, current profit in 1964. Profit after tax also recorded the largest increase (25.2%) in Japanese history except the boom period of 1950s Korean War. The current profit of the largest gigantic trust Shin Nippon Steel amounted to 49,100 million yen. This is really 4.5 times larger than that of last September and the largest increase in the past. The biggest cause of such increase of profit is, of course, the price rises of products.

What a good contrast! Inflation is a torture to the mass of society and a blessing to a few big corporations. The interests of the two classes conflict in inflation. The one loses and the other gains in inflation,

Konosuke Matsushita, chairman of Matsushita Electric (known as *National* abroad) which is a typical representative of monopoly, confessed so honestly and baldly the intimate and dangerous relationship between profit and inflation.

> " Yearly settlements of accounts of many corporations are good owing to yearly rising prices. The rising price of land renders the mortgage more valuable which corporations offer to banks. Corporations can make profit since the price of land and commodities are rising. Without price rises, how few corporations can make profit! Does Government know that corporations will go bankrupt if the rises of both prices of land and commodities stop? "[1]

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[1] *Asahi Newspaper*, June 7, 1972.

The initiating and fundamental cause of general price rises is a monopoly price. Monopoly capitals raise prices above free competition prices (=prices of production) and acquire monopoly profit exceeding average profit by ristricting competition among them by mutual agreements or actions. On the other hand non-monopoly capitals can obtain only small profit below average. Consequently monopoly capital can accumulate sufficiently, while non-monopoly capital can accumulate insufficiently. The result of this distortion in the accumulation of capital reflects itself in the distortion of supply structure. Monopoly capitals can now supply sufficiently, while non-monopoly capital insufficiently. Therefore, the prices of non-monopoly commodities rise, while that of monopoly commodities remain unchanged by controlling supply. The behavior of the two prices results in a general rise of price level. This is inflation.[2]

The present paper does not deal with this explanation, but tries to shed light on monopoly prices in Japan. In this paper we shall confine ourselves to the statistical proof and empirical study of monopoly prices in Japan.

II. *How to Prove Monopoly Price?*

Monopoly price can be defined as follows.

Monopoly price = price of production + monopolistic surplus profit
= cost price + average profit + monopolistic surplus profit

According to this formula those prices which are above prices of production by monopolistic surplus profit are monopoly prices. Price of production, which Adam Smith called free competition price,[3] serve as a standard to judge monopoly price. But practically we cannot know this price of production. First of all cost price is unknown to us, as a monopolistic corporation never let us know it. Secondly socially average profit is difficult to compute as data are not wholly available. Therefore it is impossible to prove monopoly prices at a certain point, e.g. in a certain year. So we must adopt an alternative method for our present purpose.

Let us observe carefully the movements of two prices——actual prices and prices of production——in the course of time, for example, 1963–1971. If we succeed in finding out the fact that the actual prices move rather stably and the prices of production move downward in the collapse of time, then we could conclude these actual prices were surely monopoly prices, since the difference between the two prices is no doubt monopolistic surplus profit. In this method, it would not matter at all whether the actual price in a starting year is above the price of production, that is, a monopoly price or not. It could be a monopoly price or non-monopoly price. The problem here is to prove monopoly price by the two counteracting movements of the actual price and the price of production in the course of time. The second must show a downward tendency reflecting rising labor productivity, while the first must show rather a sticky tendency reflecting restrictions of competition by monopolies.

But here it is also difficult to prove statistically falling prices of production. So let us use commodity-values instead of prices of production. Suppose the organic composi-

[2] For the details see my book, *The Price Theory of Monopoly Capitalism*, Tokyo, 1972, Chapter 10.
[3] Adam Smith, *Wealth of Nations*, edited by E. Cannan, vol. 1, p. 63.

tion of capital of monopoly is higher than social average as a result of concentration and centralization of capital in the hands of monopoly. Then the price of production of a monopoly commodity is as follows.

$$\begin{aligned}\text{Price of production} &= \text{cost price} + \text{average profit} \\ &= c + v + m + \text{transfer of } m \text{ from other departments } (\alpha) \\ &= \text{value } (c + v + m) + \alpha\end{aligned}$$

This formula indicates that the price of production move in relation to value. Therefore, hereafter we use this commodity value in place of the price of production.

Next problem is how to measure statistically the value of monopoly commodity. The value of a commodity is determined by the labor-time socially necessary to produce it. The labor-time is an inherent measure of a value. "The labor-time socially necessary is that required to produce an article under the normal conditions of production, and with the average degree of skill and intensity prevalent at the time."[4] It is the average of individual labor-times of all the capitals belonging to the same department of production. Can we find such statistical data? Partly yes. The Ministry of Labor, Japan, publishes *Report on Labor Productivity* every year, which includes "Indexes of man-hours input per unit of product by selected product." These *man-hours* correspond to our labor-time socially necessary, since the Ministry investigates all the individual labor-times of all the factories producing the same article and gives the *man-hours* as the average of them. In this sense this report is the best for our purpose, but to our regret it covers only 25—30 articles of which we could make the use of only four; *automobile tires and tubes*, *watches and clocks*, *bearing*, and *iron & steel*. These four commodities, whose departments of production are highly monopolistic, are commonly regarded as monopoly articles. The labor-time necessary without * in the Table 1 is taken from the *Report*.

Then how can we measure the values of other monopoly commodities? The *man-hours* of the Ministry of Labor can be formulated as follows.

$$\text{Man-hours per unit of product} = \frac{\text{total of man-hours during the year}}{\text{total of output during the year}} \qquad (1)$$

Let us take a reciprocal of the formula (1). It is nothing but labor productivity meaning how many units of output one man per hour produces. Generally the index of labor productivity is available by *Quarterly Journal of Productivity Statistics* by Japan Productivity Center. From this source we got the indexes of the labor productivity and the indexes of values (a reciprocal of labor productivity) of six commodities; *electricity*, *gas*, *photograph sensitive materials*, *glass sheet*, *aluminium and synthetic fibres*.

The formula of the labor productivity in the *Quarterly* is as follows.

$$\text{Labor productivity} = \frac{\text{total of output during the year}}{\text{total of man-days during the year}} \qquad (2)$$

But this source does not give us the indexes of typical monopoly commodities such as beer, watches and automobiles. So we estimated them in our own ways.

Beer. We made the best use of *Report on Securities* of the largest three beer brewery corporations; Kirin, Sapporo and Asahi. But this report gives no man-hours or man-days. It gives only number of empolyees in each term of settlement of account. So we got the labor productivity by the following formula.

[4] Karl Marx, *Capital*, vol. 1, The Modern Library Edition, p. 46.

$$\text{Labor productivity} = \frac{\text{total of output during the year}}{\text{average number of employees}} \tag{3}$$

The labor-time necessary is a mere reciprocal of the formula (3).

Watches and clocks, automobiles and bearing. The labor-times necessary of these three commodities are obtainable from the ML's *Report*, but we computed it directly according to (2) from the original datum *Year Book of Machinery Statistics* on which the statistics of Japan Productivity Center are based. This is because we want to compare the JPC's statistics with ML's.

Here we have to examine the differences which lie among formula (1), (2) and (3). The standards by which the labor productivity and the labor-time necessary of different commodities are calculated are different. ML's indexes are output per man-hour, JPC's and my indexes (watches and clocks, automobiles and bearing) are output per man-day, and my indexes of beer is output per man-year.

This difference of the standards does not matter here. First we do not compare one commodity with another. We want to know only year-to-year changes of the same and one commodity irrespective of others. Secondly, we use only indexes and in these indexes the different standards disappear entirely. The relationship between the three standards is following.

$$\text{Output per man-hour} = \frac{\text{output per man-day}}{\text{working hours per day } m} = \frac{\text{output per man-year}}{m \times \text{working days per year } n}$$

Indexes are obtained by dividing real figures of other years by that of the standard year and therefore m, n disappear. Let us take the example of beer. The output of beer per employee in 1966 is 145.2794 kl. This is man-year output. So man-day output is $\frac{145.2794}{n}$ and man-hour output is $\frac{145.2794}{mn}$. The man-hour output of the base year 1965 is $\frac{137.9636}{mn}$. Consequently the index of labor productivity in 1966 is

$$\frac{145.2794}{mn} \times \frac{mn}{137.9636} \times 100 = 105.3$$

Thus m and n disappear in the index.

The twelve commodities so far selected are commonly recognized as typical monopoly commodities in this country, as the degree of concentration of output in Table 1 clearly indicates. But there are many other monopoly commodities which are not covered here by the reason of the lack of statistics. The present analysis is of nature of case study and not over-all study of monopoly commodities.

III. *Productivity, Value and Price*

In this section we observe movements of three indexes——the labor productivity, the labor-time necessary (=value) and the actual price of the twelve monopoly commodities (Table 1).

1. Electricity and gas These two are typical local monopoly. Electricity in Tokyo is solely supplied by Tokyo Electricity Corporation and gas in the same area is monopolistically supplied by Tokyo Gas Corporation. As Chart 1 indicates, the labor productivity

TABLE 1. LABOR PRODUCTIVITY, LABOR-TIME SOCIALLY NECESSARY (=VALUE)

Commodity \ Year		1963	1964	1965	1966
Electricity					
Labor productivity		82.3	94.0	100.0	109.8
Labor-time necessary*		121.5	106.4	100.0	91.1
Consumers price		101.1	100.1	100.0	100.1
Gas					
Labor productivity		84.6	91.6	100.0	106.4
Labor-time necessary*		118.2	109.2	100.0	94.0
Consumers price		101.2	100.2	100.0	100.1
Photograph sensitive materials					
Labor productivity		83.6	94.0	100.0	108.3
Labor-time necessary*		119.6	106.4	100.0	92.3
Wholesale price		99.9	99.8	100.0	97.7
Glass sheets					
Labor productivity		86.6	100.0	100.0	116.2
Labor-time necessary*		115.5	100.0	100.0	86.1
Wholesale price		110.8	104.7	100.0	99.3
*Beer***					
Real figures					
Output(kl)	(1)	1,653,881	1,996,819	1,929,421	2,059,916
Employees	(2)	12,427	13,125	13,985	14,179
Labor productivity	(1)/(2)	133.0877	152.1386	137.9636	145.2794
Labor-time necessary (year)	(2)/(1)	0.007514	0.006573	0.007249	0.006883
Labor productivity		96.5	110.3	100.0	105.3
Labor-time necessary		103.7	90.7	100.0	95.0
Wholesale price		99.2	99.2	100.0	103.5
Aluminium					
Labor productivity		78.5	89.6	100.0	113.4
Labor-time necessary*		127.4	111.6	100.0	88.2
Wholesale price		98.0	100.0	100.0	100.4
Synthetic fibres					
Labor productivity		79.0	89.4	100.0	121.9
Labor-time necessary*		126.6	111.9	100.0	82.0
Wholesale price		92.2	97.1	100.0	96.6
Automobile tires and tubes					
Labor productivity*		82.3	94.9	100.0	118.5
Labor-time necessary		121.5	105.3	100.0	84.4
Wholesale price		102.5	99.4	100.0	98.6
*Watches and clocks****					
Real figures					
Output (pieces)	(1)	21,475,403	24,594,145	27,185,760	29,285,010
Total of employees used	(2)	4,741,570	4,580,563	4,637,559	4,270,806
Labor productivity	(1)/(2)	4.5292	5.3692	5.8621	6.8570
Labor-time necessary (day)	(2)/(1)	0.22079	0.18625	0.17059	0.14584
Labor productivity		77.3	91.6	100.0	117.0
Labor-time necessary		129.4	109.2	100.0	85.5
Labor-time necessary (ML)		125.4	110.6	100.0	85.0
Wholesale price		99.2	99.2	100.0	101.4

AND PRICES: 12 TYPICAL MONOPOLY COMMODITIES, 1963-1971

1967	1968	1969	1970	1971	Degree of output concentration (%), 1971
124.9	138.4	157.6	181.8	192.9	Local monopoly
80.1	72.3	63.4	55.0	51.8	
100.3	100.3	100.3	99.3	100.6	
117.3	128.3	140.4	152.8	157.0	Local monopoly
85.3	77.9	71.2	65.4	63.7	
100.1	100.1	100.1	100.3	99.0	
					(color)
120.0	140.6	158.0	186.0	214.6	Fuji 79.3 (83.5)
83.3	71.1	63.3	53.8	46.6	Konishiroku 20.7 (16.5)
97.5	106.8	106.9	106.9	107.7	total 100.0(100.0)%
					Asahi 49
150.9	171.0	194.5	224.3	232.4	Nippon 33
66.3	58.5	51.4	44.6	43.0	Central 18
96.6	93.8	93.3	94.9	95.8	total 100%
2,319,989	2,404,343	2,611,348	2,847,677	2,261,898	Kirin 58.9
14,282	14,818	15,219	15,399	15,647	Sapporo 22.0
162.4415	162.2583	171.5847	184.9261	144.5579	Asahi 14.9
0.006156	0.006163	0.005828	0.005408	0.006918	Suntory 4.2
117.7	117.6	124.4	134.0	104.8	total 100.0%
84.9	85.0	80.4	74.6	95.4	
103.5	108.6	112.1	113.3	117.9	
					Nippon Light Metal 26.9
120.0	134.4	146.0	158.5	174.5	Sumitomo Chemical 26.5
83.3	74.4	68.5	63.1	57.3	Showa Denko 24.5
102.5	103.5	108.1	109.9	105.2	Mitsubishi Chemical 18.1
					Mitsui Aluminium 4.1
					total 100.0%
					(Nylon)
157.4	175.4	201.5	235.5	250.9	Toray 35.3
					Unitika 19.5
63.5	57.0	49.6	42.5	39.9	Teijin 12.6
					Asahi Chemical 11.7
96.6	97.5	88.5	85.1	81.7	Kanebo 11.3
					Toyobo 8.9
					total 99.3%
					(Tires)
134.4	149.5	163.7	168.6	177.0	Bridgestone 49.2
74.4	66.9	61.1	59.3	56.5	Yokohama 22.3
96.5	93.2	100.0	104.1	104.0	Other 4 28.5
					total 100.0%
31,747,571	35,665,136	42,036,312	49,695,168	53,534,364	(Watches)
3,934,764	3,766,538	4,090,122	4,290,000	4,667,000	Seiko 62.4
8.0685	9.4689	10.2775	11.5840	11.4708	Citizen 16.3
0.12394	0.10561	0.09730	0.08633	0.08718	Orient 7.6
					Riko 1.7
137.6	161.5	175.3	197.6	195.7	Others 12.0
72.7	61.9	57.0	50.6	51.1	total 100.0%
79.8	73.6	66.5	65.1	66.2	
103.4	104.0	105.5	108.6	109.6	

TABLE 1.——continued

Commodity \ Year		1963	1964	1965	1966
*Automobiles***					
Real figures					
Output	(1)	1,283,541	1,703,697	1,875,614	2,286,399
Total of employees used	(2)	54,140,149	61,096,878	59,304,870	64,308,970
Labor productivity	(1)/(2)	0.02371	0.02789	0.03163	0.03556
Labor-time necessary (day)	(2)/(1)	42.1803	35.8614	31.6189	28.1267
Labor productivity		75.0	88.2	100.0	112.4
Labor-time necessary		133.4	113.4	100.0	89.0
Labor-time necessary (ML)		113.4	100.7	100.0	86.6
Wholesale price		103.2	100.8	100.0	99.1
*Bearings****					
Real figures					
Output (thousand)	(1)	244,079	301,854	311,793	360,151
Total of employees used	(2)	6,307,650	6,269,577	6,160,789	5,864,209
Labor productivity	(1)/(2)	38.6957	48.1458	50.6093	61.4151
Labor-time necessary (day)	(2)/(1)	0.02584	0.02077	0.01976	0.01628
Labor productivity		76.5	95.1	100.0	121.4
Labor-time necessary		130.8	105.1	100.0	82.4
Labor-time necessary (ML)		127.4	105.8	100.0	90.4
Wholesale price		109.7	102.3	100.0	97.3
Iron & steel					
Labor productivity		77.4	97.5	100.0	119.8
Labor-time necessary		118.4	103.5	100.0	89.2
Wholesale price		100.7	101.6	100.0	101.1

Sources and notes:

(1) Labor productivity=a year's output/man-days. Japan Productivity Center, *Quarterly Journal of Productivity Statistics.*

(2) Labor-time necessary=man-hours/a year's output. Ministry of Labor, *Report on Labor Productivity.*

(3) Labor-time necessary* is a mere reciprocal of labor productivity and labor productivity* is of labor-time necessary.

(4) ** Labor productivity=a year's output/average number of employees. Ministry of Finance, *Report on Securities.*

(5) *** Labor productivity=a year's output/man-days. Ministry of International Trade and Industry, *Year Book of Machinery Statistics.*

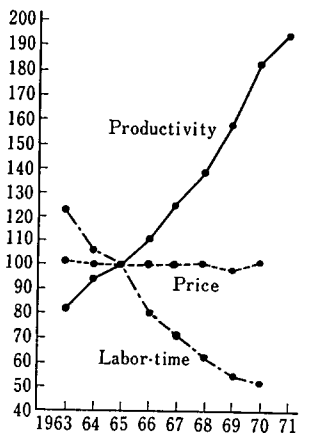
(6) Consumer price——Bureau of Statistics Office of the Prime Minister, *Annual Report on the Consumer Price Index.* Wholesale price——Bank of Japan, *Year Book of Wholesale Price Index.*

(7) Degree of output concentration ——*Toyo Keizai's Statistics Monthly*, Aug. 1972.

of electricity industry rose very sharply from 1963 to 1971, owing to the enlargements of power stations and many other technical improvements. The productivity increased 2.3 times during the 9 years. The labor productivity of gas, as Chart 2 indicates, also increased very rapidly. It grew 1.8 times from 1963 to 1971. Consequently the labor-time socially necessary (a reciprocal of the labor productivity) must have fallen very rapidly. The values of the two commodities fell about half of 1963 in 1971. Then what became of actual prices? As the Charts clearly show, they remained almost unchanged during the period. They never reflected any change of increasing productivity and falling value. The margin be-

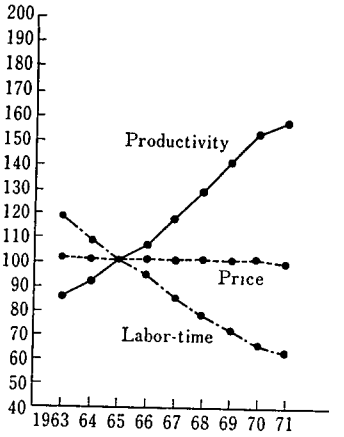
1967	1968	1969	1970	1971	Degree of output concentration (%), 1971	
					(Passenger cars)	
3,146,486	4,085,826	4,674,932	5,289,157	5,810,774	Toyota	37.7
71,303,752	83,013,850	83,146,661	51,992,000	52,733,000	Nissan	31.2
0.04413	0.04922	0.05623	0.10173	0.11019	Toyo Kogyo	8.2
22.6614	20.3175	17.7856	9.8299	9.0750	Mitsubishi	6.7
139.5	155.6	177.8	321.6	348.4	Honda	5.8
71.7	64.3	56.2	31.1	28.7	Daihatsu	3.8
85.2	74.0	63.8	59.1	52.8	Other 3	10.0
97.7	96.2	94.5	94.2	94.0	total	100.0%
495,768	616,231	766,368	988,228	1,076,116	Nippon Seiko	27.5
6,202,243	6,716,582	7,105,106	7,860,000	8,170,000	Koyo Seiko	24.7
79.9337	91.7477	107.8616	125.7288	131.7155	Toyo Bearing	22.8
0.01251	0.01090	0.00927	0.00795	0.00759	Fujikoshi	8.1
157.9	181.3	213.1	248.4	260.3	Others	16.9
63.3	55.2	46.9	40.2	38.4	total	100.0%
78.7	62.6	54.8	47.2	46.0		
99.3	101.5	100.4	104.8	107.5		
					(Iron)	
148.5	165.8	201.1	229.5	223.9	Nippon Steel	43
					Nippon Kokan	16
81.2	71.6	61.2	51.7	51.9	Sumitomo Metal Industries	14
					Kawasaki	14
103.5	96.5	102.4	111.8	102.2	Kobe	7
					total	80%

CHART 1. ELECTRICITY



Source: Table 1.

CHART 2. GAS

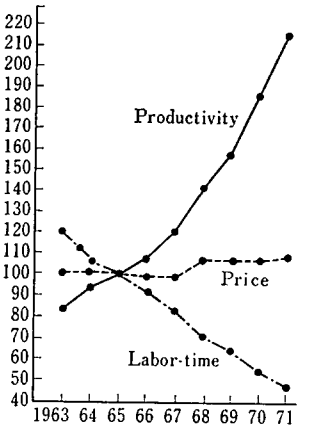


Source: Table 1.

tween the price and the value became the monopolistic surplus profit of electricity and gas corporations.

2. Photograph films They are perfectly monopolized by big two——Fuji Film (share

CHART 3. PHOTOGRAPH FILMS

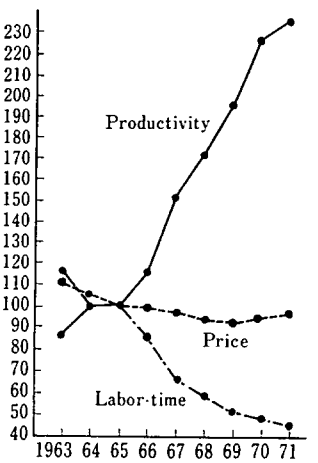


Source: Table 1.

—80%) and Konishiroku (20%). Naturally it became the object of investigation by Fair Trade Commission.[5] As Chart 3 indicates, the productivity made a rapid growth (2.7 times) and the value measured by the labor-time fell about half. The price had a tendency to go up, owing to 1968's raise. Thus the difference between the rising price and falling value belonged to the film corporations as monopoly profit.

3. Glass sheets They are the perfect monopoly of three major corporations—— Asahi Glass (share—49.4%), Nippon Sheet Glass (32.5%) and Central Glass (18.1%). Glass sheets as well as photograph films are typical monopoly commodities in Japan. The labor productivity increased 2.7 times between 1963–71 and the labor-time socially necessary decreased to a great degree (Chart 4). This was due to the introductions of such new

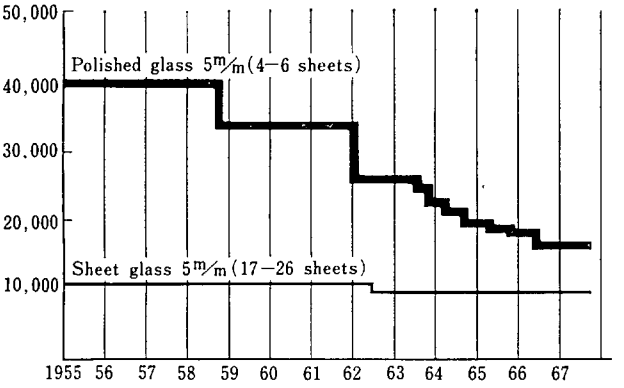
CHART 4. GLASS SHEET



Source: Table 1.

[5] See Fair Trade Commission, *Administered Price*, Tokyo, 1970.

CHART 5. PRICES OF SHEET GLASS AND POLISHED GLASS



Source: "Situation and Problems of Glass Sheet Industry," *Monthly of Nippon Kaihatsu Ginko*, August 1967.

techniques as Pittsburgh method (1964—Central, 1965—Asahi), Duplex method (1963—Central), revised Ford system (1962—Asahi), Float method (1965—Japan, Asahi) and so on. The average ability of production per oven increased from 81,000 boxes a month in 1958 to 98,000 boxes in 1966. On the other hand, the actual price fell considerably during 1963–65, fell a little bit during 1965–69 and rose slightly during 1969–71. The price fall of 1963–65 was mainly due to the price fall of polished glass sheets, brought by continual innovations and rationalizations (Chart 5). The price of polished glass sheets fell 18% from 26,400 yen per box in 1960 to 22,400 yen in 1965. But the manufacturing cost and hence total cost fell more sharply than this. The total cost reduced 22% from 23,500 yen per box in 1960 to 19,200 yen in 1965. The result is the increase of net profit from 2,900 yen per box in 1960 to 3,200 yen in 1965. This is 10% increase (Table 2). This analysis distinctly indicates that profit increases in spite of the falling price thanks to the increasing productivity. Therefore needless to say, a vast amount of monopoly profit went into the pockets of the sheet glass manufacturers during 1965–71.

TABLE 2. REDUCTION OF COST OF POLISHED GLASS SHEET (YEN)

	1960	1965
Unfinished sheets	6,800	3,800
Materials	3,700	2,100
Auxiliary	800	700
Wages	1,000	800
Depreciation	1,000	1,400
Miscellanous	4,900	3,400
Manufacturing cost	18,200	12,200
General and sales expenses	2,600	3,200
Interest	2,700	3,800
Total cost	23,500	19,200
Price	26,400	22,400
Net profit	2,900	3,200

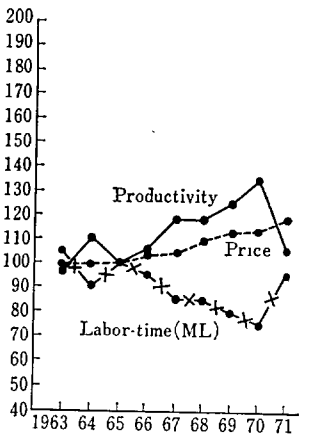
Source: See Chart 5.

4. Beer The production of beer is wholly concentrated in the hands of four major brewery corporations——Kirin (share —59%), Sapporo (22%), Asahi (15%) and Suntory (4%). It is quite natural that the Fair Trade Commission suspected the exist-

ence of administered price of beer and investigated the industry.[6] The labor productivity of the industry excluding Suntory whose main product is whisky registered 34% of increase during 1965–1970[7] (Chart 6). This increase is rather small in comparison with other 11 industries now under investigation. However small it might be, it is certain that the productivity rose and the labor-time necessary (=value) decreased. On the other hand the price of beer was steadily rising during the same period. It rose 18% from 1965 to 1970 (Table 3). This percentage of the price rise is the biggest of all the prices of the 12 commodities now under investigation. This compensated the slow increase of the productivity and the slow decrease of labor-time (=value) of the beer industry. Thus the difference between the falling value and the rising price became monopoly profit and belonged to the few beer monopoly capitals.

5. Aluminium It was the perfect monopoly of three major——Nippon Light Metal, Showa Denko and Sumitomo Chemical——until 1963 when an entry was made by Mitsubishi Chemical into this department. Mitsui Aluminium also entered the department in 1970. The labor productivity of the industry made a rapid growth during 1963–1971 (3.2 times) and the labor-time necessary as a reciprocal of the productivity made a rapid decrease during the same period (Chart 7). This was brought about by the expansions of size

CHART 6. BEER



Source: Table 1.

TABLE 3. PRICE OF BEER (BIG BOTTLE, YEN)

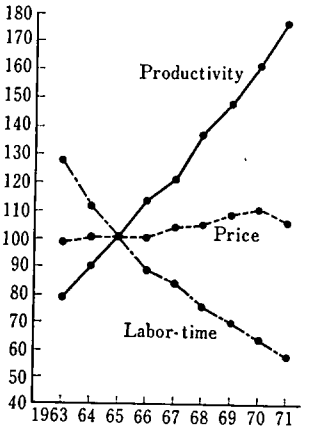
	Oct. 1960	Apr. 1962	Oct. 1965	May 1968	Sep. 1968	Oct. 1970
Producer's price	114.00	104.00	107.00	114.00	115.80	121.80
Tax	70.13	60.13	60.13	67.10	67.10	67.10
Price	125.00	115.00	120.00	127.00	130.00	140.00

Source: *Report on Securities* and Fair Trade Commission, *Administered Prices* (2), 1972, p. 16.

[6] See Fair Trade Commission, *Administered Price* (2), Tokyo, 1972.

[7] The falls of the productivity both in 1965 and 1970 were primarily due to the reduction of production caused by depressions.

CHART 7. ALUMINIUM



Source: Table 1.

TABLE 4. EXPANSIONS OF ALUMINIUM PLANTS

(1,000 tons)

Corporation	Factory	1950	1955	1960	1965	1967	1971
Nippon Light Metal	Kanbara	27.0	28.0	40.0	85.0	107.0	140.0
	Niigata	—	—	30.3	32.0	38.4	61.0
	Tomakomai	—	—	—	—	—	102.5
Showa Denko	Kitagata	9.0	11.7	24.3	35.0	41.5	43.2
	Omachi	—	9.5	10.9	11.3	17.0	42.6
	Chiba	—	—	—	33.7	61.4	139.0
Sumitomo Chemical	Kikumoto	12.0	15.0	28.4	31.5	31.7	103.0
	Nagoya	—	—	—	49.0	51.3	50.0
	Isoura	—	—	—	—	17.0	84.0
Mitsubishi Chemical	Naoetsu	—	—	—	42.5	67.0	160.0
	Sakaide	—	—	—	—	—	90.0
Total		48.0	64.2	133.9	320.0	432.3	1,015.3

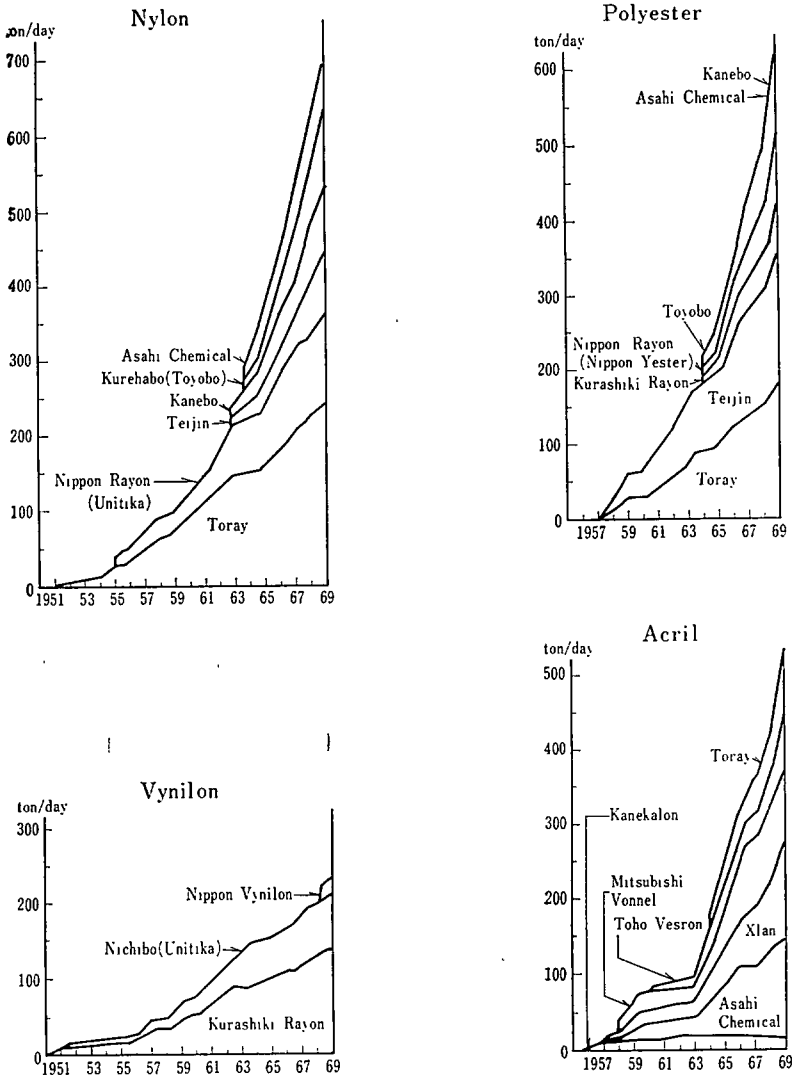
Source: Report on Securities.

of plants (Table 4) and the introduction of big sized cubic electric furnaces. On the other hand the price of aluminium, which is regulated by prices of big monopolies in the United States and Canada,[8] was gradually rising during 1963–70. Thus discrepancy between the falling value and the rising price became larger and all of this became the monopoly profit of the monopoly capitals. The price of aluminium is a monopoly price.

6. Synthetic fibres Chart 8 shows subsequent entries made in the past into Nylon, Polyester, Acril and Vynilon producing departments. Yet still now each department is highly concentrated in only 3–8 big monopolies. Since no datum by department is available, let us use data covering all the departments as unity. The rapid growth of the labor

[8] Masao Anzai, Chairman of Showa Denko, says in his book "Prices declared by giant aluminium refinery corporations of U.S.A. and Canada are substantially the standards of international prices...." Domestic prices are these international prices plus duties and transportation fees (*Aluminium Industry*, Tokyo, 1971, pp. 396–7).

CHART 8. THE ENTRIES AND ABILITIES OF SYNTHETIC FIBRES MANUFACTURERS

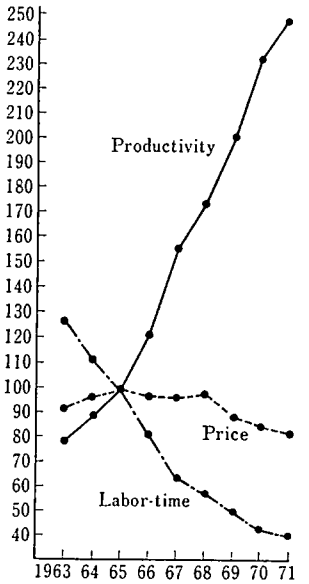


Source: Hoshimi Uchida, *Synthetic Fibres Industry*, newly-revised edition, Tokyo, 1970, p. 232.

productivity and rapid fall of the labor-time (=value) can be observed distinctly (Chart 9). These are due effects of scale-merit brought by mass production. On the other hand, price fell considerably since 1965. This is a reflexion of harder competition brought by new entries (Chart 8), the existence of excessive capacity and cheapening raw materials. But the degree of falling value (1965–71, 40%) is larger than that of falling price (19%). Consequently monopolistic surplus profit was brought about. The price of synthetic fibres is a monopoly price.

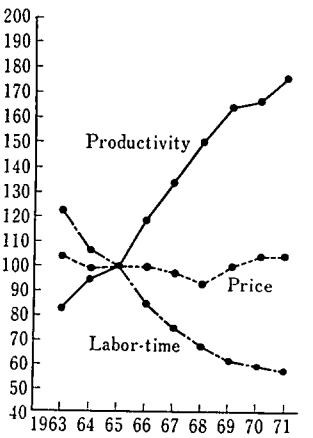
7. Automobile Tires and Tubes They are monopolized by 6 major corporations; Bridgestone, Yokohama and others. The Ministry of Labor's *Report* indicates the same

CHART 9. SYNTHETIC FIBRES



Source: Table 1.

CHART 10. AUTOMOBILE TIRES AND TUBES



Source: Table 1.

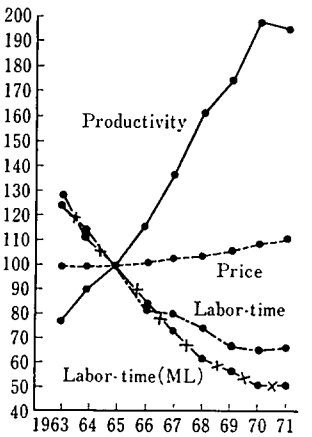
pattern as other commodities which we have observed so far——the falling labor-time, the rising productivity and the sticky price (Chart 10). This price is also a monopoly price.

8. Watches and Clocks Watches are the monopoly of Seiko (share—62.4%), Citizen (16.3%), Orient (7.6%), Ricoh and others (13.7%). Until 1966 they were the perfect monopoly of the first big four. The same story of the sharply rising productivity of labor, the falling labor-time (both ML indexes and my indexes) and the slightly rising price

can be read here, too (Chart 11). No one can suspect the existence of monopoly profit and price. In 1963 a laborer produced 4.5 watches and clocks a day and in 1971 he produces as many ones as 11.5 . In 1963 the value of a watch or clock was 0.22 working days and in 1971 it decreased to 0.087 (See Table 1).

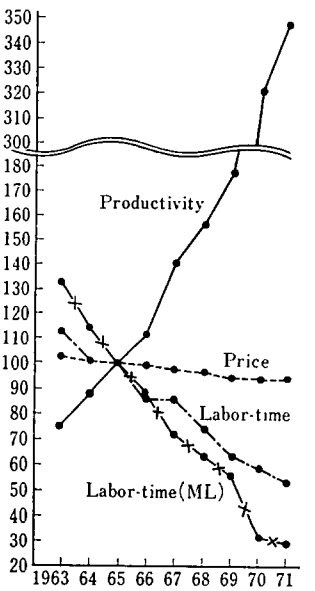
9. Automobiles Passenger cars are now produced by only big nine corporations; Toyota, Nissan, Toyo Kogyo, Mitsubishi, Honda, Daihatsu, Suzuki, Fuji and Isuzu.

CHART 11. WATCHES AND CLOCKS



Source: Table 1.

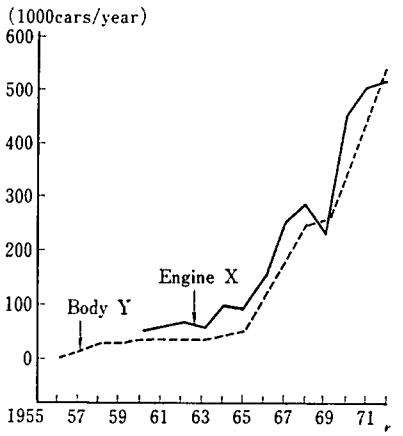
CHART 12. AUTOMOBILES



Source: Table 1.

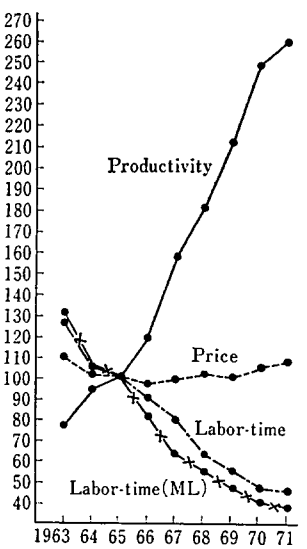
The productivity of the industry rose very sharply during 1963–71 (4.6 times) and the labor-time (value) fell very sharply to a quarter (Chart 12). The rate of growth and rate of fall are largest of all the twelve commodities here treated. To produce a car required 42 working days in 1963, but it required only 9 days in 1971. This sharp fall of the value is mainly due to large scale production (Chart 13). On the other hand the price of automobiles fell 9% from 1963 to 1971, but the value fell still more (78%). This gap became monopoly profit. The existence of monopoly price is very clear.

CHART 13. LARGE SCALE OF PRODUCTION, ENGINES AND BODIES



Source: *White Paper on Economy*, 1972, p. 337.

CHART 14. BEARINGS

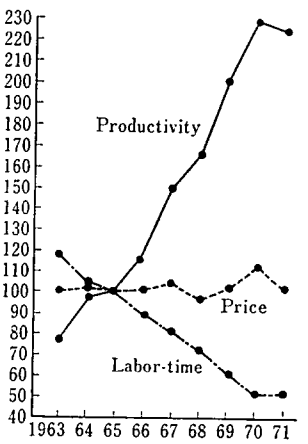


Source: Table 1.

10. Bearings Three quarters of bearings are solely produced by big three; Nippon Seiko, Koyo Seiko and Toyo Bearing. The same and old story can be also told here of the labor productivity, the labor-time and the price (Chart 14).

11. Iron and Steel Eighty percent of iron is produced by big five; Nippon Steel (43%), Nippon Kokan (16%), Sumitomo Metal (14%), Kawasaki Steel (14%) and Kobe Steel (7%), and seventy nine percent of steel is produced by the same big five. The labor productivity of iron and steel as unity made a sharp rise (three times) and the labor-time necessary to produce one ton of iron and steel decreased to a great degree (Chart 15). This is nothing but a result of the 1st rationalization (1951–55), 2nd rationalization (1956–60) and 3rd rationalization (1961–). Large scale of mills were constructed one after another and the scale of blast furnaces became larger and larger (Table 5 and Chart 16). LD converters were introduced, and rapidly took the place of electric furnaces and open hearth furnaces (Chart 17). On the other hand the price was rather rising as a tedencey. Thus monopoly

CHART 15. IRON AND STEEL



Source: Table 1.

TABLE 5. THE BIGGEST TEN OF BLAST FURNACES IN THE WORLD

Names of Corporations (Nationality)	Names of factories	No.	Diameter (m)	Inside measurement (m^3)	Date of operation
Nippon Steel (Japan)	Oita	No. 1	14.0	4,158	1972. 4
Nippon Kokan (Japan)	Fukuyama	No. 4	13.8	4,197	1971. 4
Nippon Steel (Japan)	Kimitsu	No. 3	13.4	4,063	1971. 9
(U. S. S. R.)	Karaganda	No. 2	11.0	3,700	1971. 3
Kawasaki (Japan)	Mizushima	No. 3	12.4	3,363	1970.10
Sumitomo Chemical (Japan)	Kashima	No. 1	12.4	3,159	1971. 1
Nippon Kokan (Japan)	Fukuyama	No. 3	11.8	3,016	1969. 7
(U. S. S. R.)	West Siberia	No. 3	—	3,000	1971. 3
Nippon Steel (Japan)	Nagoya	No. 3	11.7	2,924	1969. 4
Nippon Steel (Japan)	Kimitsu	No. 2	11.6	2,884	1969.10

CHART 16. ENLARGEMENT OF BLAST FURNACES

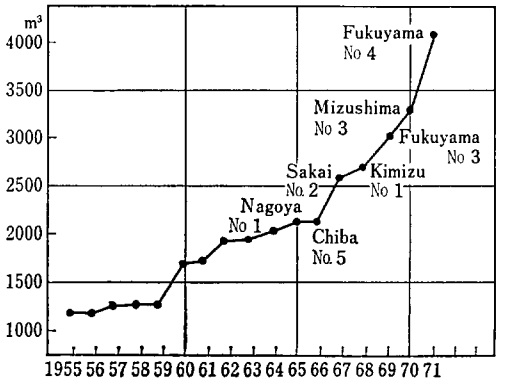
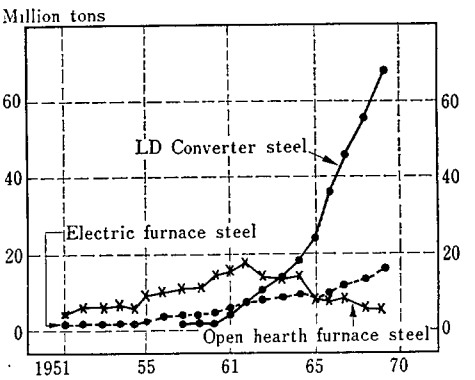


CHART 17. THE INCREASE OF LD CONVERTER STEEL



Source: Statistical Manual of Iron and Steel, 1970.

profit was created in the iron and steel industry.

So far we observed the iron and steel industry as unity, but there are various kinds of iron and steel articles in the industry, some of which are of monopolistic nature, while others of competitive nature. So the analysis so far carried has a limit as a monopoly analysis. Next we pick up eight typical monopoly articles of iron and steel with high degree of concentration from the *Report* by the Ministry of Labor. The eight articles are blast furnace pig iron, LD converter steel, heavy rails, big steel shapes (including steel sheet piling), wire rods, special wire rods, hot rolled broad sheets and cold rolled sheets. Table 6 and Chart 18 indicate that the labor productivity of each product sharply rose, and the labor-time necessary or value sharply declined. Some prices are perfectly irresponsible (heavy rails and tin plates), while others change. Anyway it is certain that they never moved in proportion to the falling values. Monopolistic surplus profit was thus created.

TABLE 6. LABOR PRODUCTIVITY, LABOR-TIME NECESSARY (=VALUES)

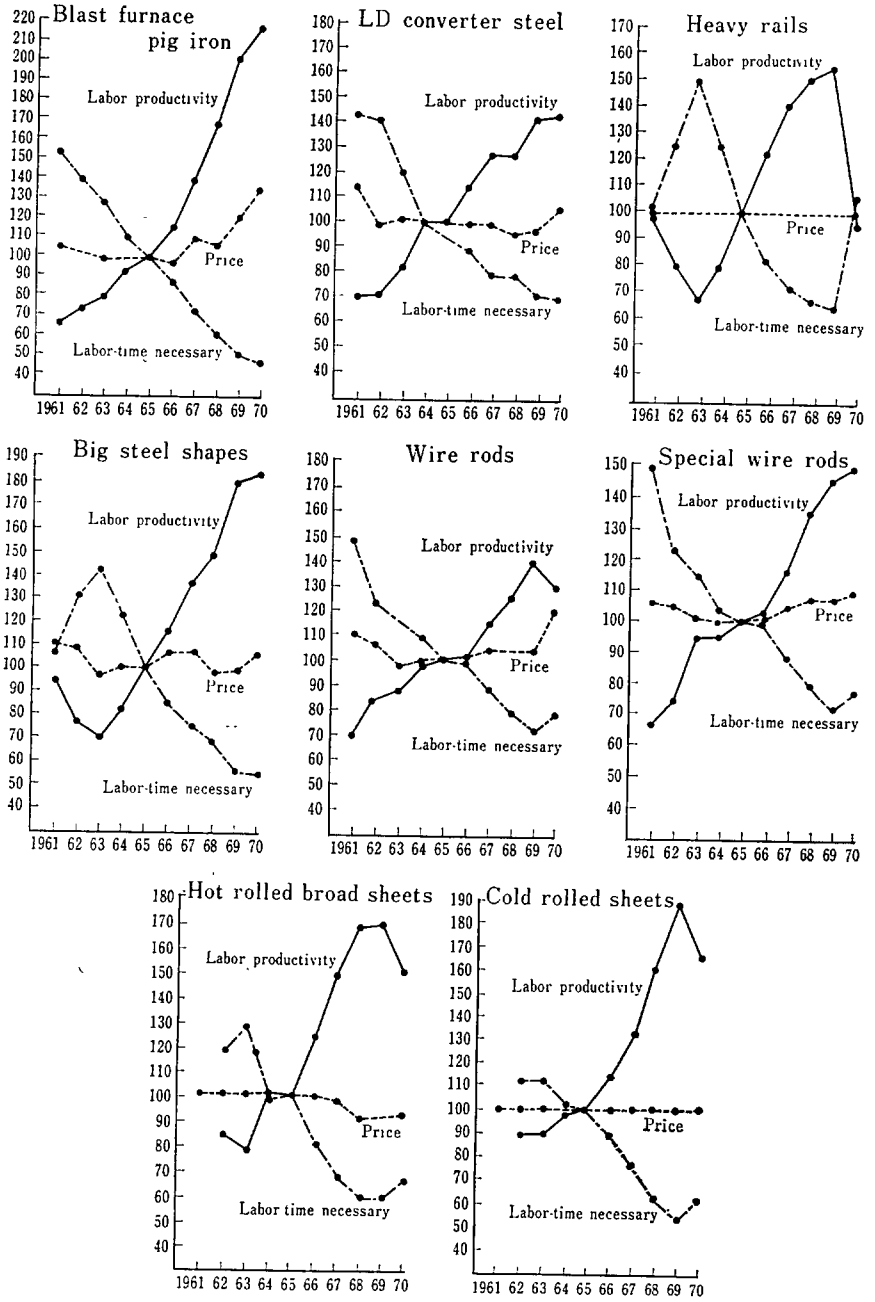
	1961	1962	1963	1964	1965
Blast furnace pig iron					
Labor productivity*	65.3	71.9	78.8	91.6	100.0
Labor-time necessary	153.2	139.0	126.9	109.2	100.0
Price	104.7	102.5	99.2	99.7	100.0
LD converter steel					
Labor productivity*	70.0	71.0	83.3	100.6	100.0
Labor-time necessary	142.9	140.8	120.1	99.4	100.0
Price (bellet)	114.5	99.3	100.7	99.8	100.0
Heavy rails					
Labor productivity*	98.5	79.7	67.2	80.1	100.0
Labor-time necessary	101.5	125.5	148.9	124.8	100.0
Price	100.0	100.0	100.0	100.0	100.0
Big steel shapes (including steel sheet piling)					
Labor productivity*	93.9	76.9	70.3	81.7	100.0
Labor-time necessary	106.5	130.4	142.2	122.4	100.0
Price	109.8	108.1	97.2	100.3	100.0
Wire rods					
Labor productivity*	67.0	81.3	87.0	97.5	100.0
Labor-time necessary	149.2	123.0	115.0	102.6	100.0
Price	109.9	107.2	98.4	99.4	100.0
Special wire rods					
Labor productivity*	67.1	73.5	93.7	95.4	100.0
Labor-time necessary	149.0	136.0	106.7	104.8	100.0
Price	106.4	104.7	100.6	100.0	100.0
Hot rolled broad sheets					
Labor productivity*	—	83.9	78.4	101.1	100.0
Labor-time necessary	—	119.2	127.5	98.9	100.0
Price (broad sheets)	100.6	100.6	100.6	100.6	100.0
Cold rolled sheets					
Labor productivity*	—	89.4	89.4	98.2	100.0
Labor-time necessary	—	111.8	111.8	101.8	100.0
Price (Tin plate)	100.0	100.0	100.0	100.0	100.0

Sources and Notes: See (2), (3), (6) and (7) of Table 1.

AND PRICES: EIGHT MONOPOLISTIC IRON AND STEEL PRODUCTS, 1963–1971

1966	1967	1968	1969	1970	Degree of concentration (%), 1970
					Nippon Steel 44
					Nippon Kokan 16
115.3	137.9	168.1	201.2	217.4	Kawasaki 14
86.7	72.5	59.5	49.7	46.0	Sumitomo Chemical 13
97.3	108.1	105.7	120.0	135.3	Kobe 7
					Total of upper 5 94%
					Nippon Steel 36
					Nippon Kokan 14
113.9	126.7	127.1	141.6	143.3	Sumitomo Chemical 12
87.8	78.9	78.7	70.6	69.8	Kawasaki 12
98.2	98.2	95.9	96.9	104.3	Kobe 5
					Total of upper 5 79%
122.4	139.5	149.5	153.8	95.1	Nippon Steel 88.1
81.7	71.7	66.9	65.0	105.2	Other 4 11.9
100.1	100.0	100.0	100.0	100.0	Total of 5 100.0%
					(Big steel shapes)
					Nippon Steel 47
					Kawasaki 19
					Nippon Kokan 14
116.1	135.9	147.9	179.5	182.5	Total of upper 3 80%
					(Steel sheet piling)
86.1	73.6	67.6	55.7	54.8	Nippon Steel 87
106.7	106.8	98.4	99.1	105.9	Kawasaki, Nippon Kokan, Osaka 13
					Total of 4 100%
					Nippon Steel 38
					Kobe 17
101.3	113.9	125.9	138.9	129.4	Sumitomo Chemical 11
98.7	87.8	79.4	72.0	77.3	Osaka Seiko 9
101.4	103.6	103.0	102.7	120.2	Nakayama Seiko 9
					Azuma Seiko 7
					Total of upper 6 91%
					(1967)
101.9	116.4	135.1	146.1	148.6	Kobe 39
98.1	85.9	74.0	68.3	67.3	Yahata 17
100.0	104.0	106.9	107.4	108.8	Fuji 16
					Total of upper 3 72%
					(broad sheets)
					Nippon Steel 49
123.5	148.6	168.4	168.9	150.6	Nippon Kokan 19
81.0	67.3	59.4	59.2	66.4	Kawasaki 17
100.0	97.9	91.2	90.5	93.2	Sumitomo Chemical 10
					Nisshin Seiko 6
					Total 100%
					(Tin plate)
					Nippon Steel 51.7
113.9	132.1	161.3	189.0	165.2	Toyo Kohan 29.7
87.8	75.7	62.0	52.9	60.5	Nippon Kokan 10.2
100.0	100.0	100.0	100.0	100.0	Kawasaki 7.4
					Other 2 1.0
					Total 100.0%

CHART 18.



Source: Table 6.

IV. *Conclusion*

So far we have analyzed statistically the movements of labor productivity, the labor-time necessary (=value) and the prices of twelve monopoly commodities during 1963–71. The conclusions we reached from the above analysis can be summarized as follows.

(1) The labor productivity increased very rapidly during 1963–71.

(2) This resulted in a rapid fall of commodity values measured by the labor-time socially necessary.

(3) On the other hand prices remained insensitive and sticky.

(4) As a result monopolistic surplus value was created between the falling value and the sticky price.

(5) Such a price as to remain insensitive and inresponsible to the rising labor productivity and hence to bring monopoly profit is surely a monopoly price.